

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 January 2004 (08.01.2004)

PCT

(10) International Publication Number
WO 2004/004227 A1

(51) International Patent Classification⁷: **H04L 12/28**,
H04Q 7/38

(21) International Application Number:
PCT/IB2002/002312

(22) International Filing Date: 26 June 2002 (26.06.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **NOKIA CORPORATION** [FI/FI]; Keilalahdentie, FIN-02150 Espoo (FI).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **HASSE, Sinivaara** [FI/FI]; Tahkorinne 19 A1, FIN-02760 Espoo (FI).

(74) Agent: **LESON, Thomas, Johannes**; TBK-Patent, Bavariaring 4-6, 80336 München (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

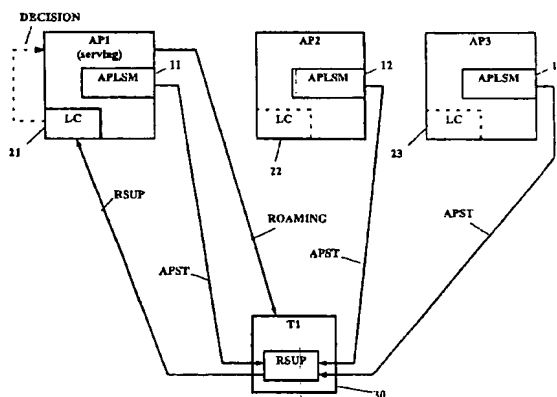
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **LOAD BALANCING IN WIRELESS COMMUNICATION NETWORK**



(57) Abstract: For load balancing in a wireless communication network comprising at least one subscriber terminal (T1, T2, T2) and a plurality of access points (AP1, AP2, AP3), a load control device (21; 110) is used which is located outside of said subscriber terminal, wherein said load control device is adapted to process information related to a load in said wireless communication network and to instruct roaming of said subscriber terminal from an associated access point to another one of said plurality of access points. Access point status information (APST) determined in said plurality of access points (S10; S110) is received and communication status information related to said plurality of access points (S20; S120) is determined. The subscriber terminal processes (S20; S120) these information into roaming support information (RSUP), which are in turn processed (S40; S160) in said load control device an access point related load based roaming analysis. On this basis, it is decided (S50; S170) by the load control device, whether said subscriber terminal is to be associated with another one of said plurality of access points.

BEST AVAILABLE COPY